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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/091,509	03/07/2002	Yukihiro Sugiyama	33240M015	8855

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EXAMINER	
MISTRY, O NEAL RAJAN	

ART UNIT	PAPER NUMBER
2625	

DATE MAILED: 11/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/091,509	SUGIYAMA ET AL.	
	Examiner	Art Unit	
	O'Neal R. Mistry	2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 March 2002*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *10-15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *10-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *07 March 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

The response received on 09/02/2005 has been placed in the file and was considered by the examiner. An action on the merits follows.

Response to Arguments

The arguments filed on 09/02/2005 have been fully considered. A response to these arguments is proved below.

Examiner's Response:

Applicant's arguments with respect to claim 10-15 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 10-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Paul et al (U.S. Publication 2002/0008561) in view of Miyasaka (USPN 5,260,559).

In regards to claim 10, Paul discloses a moving object contour detecting apparatus for detecting the contour of a moving object on the basis of a differential response type time series signal comprising: (paragraph 2, Note the examiner interprets that the system does the imaging of two different images in real-time. The real-time is the difference in time between the two images. The first is image is take at a certain time, and the second image is taken a different time other than first image. Then the images are compared to calculated the movement. In addition, the images are can be generated from a color camera which might use a CCD, or any other form for capturing electric pixels to create an image.), comprising: first means for calculating a time differential value of the time series signal output from each of the pixel electrodes (paragraph 10, Note the examiner interprets that the system is capturing images in real-time which means the images have a differences between each other by time. By have an image two different images at two different points in time also to evaluate motion);

second means for comparing the time differential value obtained by the first means with a threshold value for leading edge detection and a threshold value for trailing edge detection (paragraph 36, Note the system compares the two images and the color of intensities to analyze the output of motion of the image. The calculation is compared to a threshold value.); and third means for deciding whether an image input to the pixel electrode is a leading edge of the moving object, a trailing edge of the moving object, or others on the basis of the result of the comparison by the second means (Figure 4, paragraph 38, Note the examiner interprets Figure 4 by viewing image 1 and image 2. The two images have a difference between each other. The two images are compared on to each other by which leaves us with the leading edge and trailing edge. The intensity values of the edges demonstrates the movement of the object within the images, and allows the system to further calculated the projection of the object, by calculating the centroid of the second image.).

Paul does not expressly disclose a visual pigment similar photoelectric protein layer, and pixel electrodes providing output signals indicative of irradiation of the visual pigment similar photoelectrode protein layer.

However, Miyasaka discloses a visual pigment similar photoelectric protein layer (col. 3 line 65- col. 4 line 15), and pixel electrodes providing output signals indicative of irradiation of the visual pigment similar photoelectrode protein layer (col. 2 lines 25-51).

Paul & Miyasaka are combinable because they are from the same field of endeavor i.e. image processing (paragraph 2, Paul) & (col. 1 lines 5-20).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine and incorporate the teachings taught by Miyasaka into the system of Paul.

The suggestion/motivation for doing so would have been to one of ordinary skill in the art to combine because the system would allow a improve method of detecting images changes with high accuracy, as taught by Miyasaka. In addition, would allow a faster method of imaging, and allow improves in the method of less robust changing shapes of images, as taught by Paul.

Therefore, it would have been obvious to combine Paul with Miyasaka to obtain the invention as specified in claim 10.

In regards to claim 11, Paul discloses a moving object contour detecting method for detecting the contour of a moving object on the basis of a differential response type time series signal output (paragraph 2, Note the examiner interprets that the system does the imaging of two different images in real-time. The real-time is the difference in time between the two images. The first is image is take at a certain time, and the second image is taken a different time other than first image. Then the images are compared to calculated the movement. In addition, the images are can be generated from a color camera which might use a CCD, or any other form for capturing electric pixels to create an image.), comprising: first means for calculating a time differential value of the time series signal output from each of the pixel electrodes (paragraph 10, Note the examiner interprets that the system is capturing images in real-time which

means the images have a differences between each other by time. By have an image two different images at two different points in time also to evaluate motion); second means for comparing the time differential value obtained by the first means with a threshold value for leading edge detection and a threshold value for trailing edge detection (paragraph 36, Note the system compares the two images and the color of intensities to analyze the output of motion of the image. The calculation is compared to a threshold value.); and third means for deciding whether an image input to the pixel electrode is a leading edge of the moving object, a trailing edge of the moving object, or others on the basis of the result of the comparison by the second means (Figure 4, paragraph 38, Note the examiner interprets Figure 4 by viewing image 1 and image 2. The two images have a difference between each other. The two images are compared on to each other by which leaves us with the leading edge and trailing edge. The intensity values of the edges demonstrates the movement of the object within the images, and allows the system to further calculated the projection of the object, by calculating the centroid of the second image.).

Paul does not expressly disclose each of plural pixel electrodes in response to irradiation of a visual pigment similar photoelectric protein.

However, Miyasaka discloses each of plural pixel electrodes in response to irradiation of a visual pigment similar photoelectric protein (col. 3 line 65- col. 4 line 15 & col. 2 lines 25-51).

Paul & Miyasaka are combinable because they are from the same field of endeavor i.e. image processing (paragraph 2, Paul) & (col. 1 lines 5-20, Miyasaka).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine and incorporate the teachings taught by Miyasaka into the system of Paul.

The suggestion/motivation for doing so would have been to one of ordinary skill in the art to combine because the system would allow a improve method of detecting images changes with high accuracy, as taught by Miyasaka. In addition, would allow a faster method of imaging, and allow improves in the method of less robust changing shapes of images, as taught by Paul.

Therefore, it would have been obvious to combine Paul with Miyasaka to obtain the invention as specified in claim 11.

In regards to claim 12, Paul discloses a moving object region detecting apparatus for detecting a moving object region on the basis of a differential response type time series signal output from each of pixel electrodes in a moving object detection device using a visual pigment similar photoelectric protein (paragraph 2, Note the examiner interprets that the system does the imaging of two different images in real-time. The real-time is the difference in time between the two images. The first is image is take at a certain time, and the second image is taken a different time other than first image. Then the images are compared to calculated the movement. In addition, the images are can be generated from a color camera which might use a CCD, or any other form for capturing electric pixels to create an image.), comprising: first means for calculating a time differential value of the time series signal output from each of the pixel

electrodes(paragraph 10, Note the examiner interprets that the system is capturing images in real-time which means the images have a differences between each other by time. By have an image two different images at two different points in time also to evaluate motion); second means for comparing the time differential value obtained by the first means with a threshold value for leading edge detection and a threshold value for trailing edge detection (paragraph 36, Note the system compares the two images and the color of intensities to analyze the output of motion of the image. The calculation is compared to a threshold value.); third means for deciding whether an image input to the pixel electrode is a leading edge of the moving object, a trailing edge of the moving object, or others on the basis of the result of the comparison by the second means (Figure 4, paragraph 38, Note the examiner interprets Figure 4 by viewing image 1 and image 2. The two images have a difference between each other. The two images are compared on to each other by which leaves us with the leading edge and trailing edge. The intensity values of the edges demonstrates the movement of the object within the images, and allows the system to further calculated the projection of the object, by calculating the centroid of the second image.); and fourth means for deciding whether or not the image input to the pixel electrode is in a moving object region on the basis of the result of the decision by the third means (paragraph 40).

Paul does not expressly disclose a visual pigment similar photoelectric protein layer, and pixel electrodes providing output signals indicative of irradiation of the visual pigment similar photoelectrode protein layer.

However, Miyasaka discloses a visual pigment similar photoelectric protein layer (col. 3 line 65- col. 4 line 15), and pixel electrodes providing output signals indicative of irradiation of the visual pigment similar photoelectrode protein layer (col. 2 lines 25-51).

Paul & Miyasaka are combinable because they are from the same field of endeavor i.e. image processing (paragraph 2, Paul) & (col. 1 lines 5-20).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine and incorporate the teachings taught by Miyasaka into the system of Paul.

The suggestion/motivation for doing so would have been to one of ordinary skill in the art to combine because the system would allow a improve method of detecting images changes with high accuracy, as taught by Miyasaka. In addition, would allow a faster method of imaging, and allow improves in the method of less robust changing shapes of images, as taught by Paul.

Therefore, it would have been obvious to combine Paul with Miyasaka to obtain the invention as specified in claim 12.

In regards to claim 13, Paul in view of Miyasaka discloses the fourth means decides whether or not the image input to the pixel electrode is in a moving object region on the basis of the result of the decision by the third means and the previous result of the decision by the fourth means (paragragh 41), and the result of the decision indicating that the image input to the pixel electrode is not in the moving object region is used as an initial value of the previous result of the decision by the fourth means (paragraph 43).

In regards to claim 14, Paul discloses a moving object region detecting apparatus for detecting a moving object region on the basis of a differential response type time series signal output from each of pixel electrodes in a moving object detection device using a visual pigment similar photoelectric protein (paragraph 2, Note the examiner interprets that the system does the imaging of two different images in real-time. The real-time is the difference in time between the two images. The first is image is take at a certain time, and the second image is taken a different time other than first image. Then the images are compared to calculated the movement. In addition, the images are can be generated from a color camera which might use a CCD, or any other form for capturing electric pixels to create an image.), comprising: first means for calculating a time differential value of the time series signal output from each of the pixel electrodes(paragraph 10, Note the examiner interprets that the system is capturing images in real-time which means the images have a differences between each other by time. By have an image two different images at two different points in time also to evaluate motion); second means for comparing the time differential value obtained by the first means with a threshold value for leading edge detection and a threshold value for trailing edge detection (paragraph 36, Note the system compares the two images and the color of intensities to analyze the output of motion of the image. The calculation is compared to a threshold value.); third means for deciding whether an image input to the pixel electrode is a leading edge of the moving object, a trailing edge of the moving object, or others on the basis of the result of the comparison by the second means

(Figure 4, paragraph 38, Note the examiner interprets Figure 4 by viewing image 1 and image 2. The two images have a difference between each other. The two images are compared on to each other by which leaves us with the leading edge and trailing edge. The intensity values of the edges demonstrates the movement of the object within the images, and allows the system to further calculated the projection of the object, by calculating the centroid of the second image.); and fourth means for deciding whether or not the image input to the pixel electrode is in a moving object region on the basis of the result of the decision by the third means (paragraph 40).

Paul does not expressly disclose each of plural pixel electrodes in response to irradiation of a visual pigment similar photoelectric protein (col. 3 line 65- col. 4 line 15 & col. 2 lines 25-51).

However, Miyasaka discloses each of plural pixel electrodes in response to irradiation of a visual pigment similar photoelectric protein (col. 3 line 65- col. 4 line 15 & col. 2 lines 25-51).

Paul & Miyasaka are combinable because they are from the same field of endeavor i.e. image processing (paragraph 2, Paul) & (col. 1 lines 5-20).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine and incorporate the teachings taught by Miyasaka into the system of Paul.

The suggestion/motivation for doing so would have been to one of ordinary skill in the art to combine because the system would allow a improve method of detecting images changes with high accuracy, as taught by Miyasaka. In addition, would allow a

faster method of imaging, and allow improves in the method of less robust changing shapes of images, as taught by Paul.

Therefore, it would have been obvious to combine Paul with Miyasaka to obtain the invention as specified in claim 14.

In regards to claim 15, Paul in view of Miyasaka discloses the fourth means decides whether or not the image input to the pixel electrode is in a moving object region on the basis of the result of the decision by the third means and the previous result of the decision by the fourth means (paragraph 41), and the result of the decision indicating that the image input to the pixel electrode is not in the moving object region is used as an initial value of the previous result of the decision by the fourth means (paragraph 43).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to O'Neal R. Mistry whose telephone number is (571) 272-4052. The examiner can normally be reached on 9am - 6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh M. Mehta can be reached on (571) 272-7453. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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